

CLAIMS

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1. A package wrapping machine for wrapping packages, comprising:
 - a wrap station at which packages are wrapped;
 - a film dispensing station for drawing out film over a package at the wrap station;
 - a conveying system for moving packages along a defined path to the wrap station including:
 - a first conveyor along a first portion of the defined path;
 - a second conveyor along a second portion of the defined path, the first conveyor having an output end which feeds to an input end of the second conveyor for feeding a package traveling along the first conveyor to the second conveyor;
 - at least one sensor for determining a lateral position of a package moving along the first conveyor;
 - at least one actuator for controlling a relative lateral position of the output end of the first conveyor to the input end of the second conveyor;
 - a controller for receiving signals from the sensor and for controlling the actuator, wherein, for a given package moving along the first conveyor, and based upon signals received from the sensor, the controller effects movement of the actuator to define a relative position between the output end of the first conveyor and the input end of the second conveyor to place the given package in a desired lateral position on the second conveyor.
2. The machine of claim 1 wherein the actuator is associated with at least the output end of the first conveyor.
3. The machine of claim 1 wherein the actuator is associated with at least the input end of the second conveyor.
4. The machine of claim 1 wherein the sensor comprises an array of sensors.
5. The machine of claim 4 wherein the array of sensors is comprised of an array of optical sensors extending laterally relative to a conveying direction of the first conveyor.

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6. The machine of claim 4 wherein the array of sensors is comprised of an array of mechanical sensors that are triggered by contact with the package.

7. The machine of claim 1 wherein the desired lateral position is a centered lateral position on the second conveyor.

8. The machine of claim 7 wherein positioning of the given package at the centered lateral position on the second conveyor results in centering of the given package relative to a film dispensing axis when conveyed to the wrap station.

9. The machine of claim 1 wherein the film dispensing station is above the wrap station.

10. The machine of claim 1 wherein a section of the wrap station is vertically movable.

11. The machine of claim 1 wherein the actuator is associated with both an input end and the output end of the first conveyor.

12. A package wrapping machine for wrapping packages, comprising:
a wrap station at which packages are wrapped;
a film dispensing station for drawing out film over a package at the wrap station;
a conveying system for moving packages along a path to the wrap station, the conveying system being selectively adjustable for varying a lateral position of a package traveling along the path;
at least one sensor for determining lateral position of packages;
a controller for receiving signals from the sensor and for controlling adjustment of the conveying system, wherein, for a given package moving along the path, and based upon signals received from the sensor, the controller effects adjustment of the conveying system to establish a desired lateral position of the given package when the given package reaches the wrap station.

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13. ~~The machine of claim 12 wherein the conveying system comprises first and second conveyors and at least one actuator configured to vary a relative lateral position between the first and second conveyors.~~

14. ~~The machine of claim 12 wherein the conveying system comprises a conveyor including a first section, a second section pivotally coupled to the first section, and a third section pivotally coupled to the second section, and at least one actuator connected for lateral movement of at least one section.~~

15. ~~The machine of claim 12 wherein the conveying system is formed by only a single conveyor.~~

16. ~~In a food product wrapping machine, a method for conveying a package to a wrap station of the machine, comprising the steps of:~~
~~providing a conveying system for moving the package to the wrap station, the conveying system being selectively adjustable for varying a lateral position of a package traveling along the conveying system;~~
~~sensing a lateral position of the package;~~
~~comparing the sensed lateral position of the package with a desired lateral position of the package;~~
~~based upon the comparison, adjusting the conveying system to place the package in the desired lateral position.~~

17. ~~The method of claim 16 wherein the desired lateral position is a centered position at the wrap station.~~

18. ~~A package wrapping machine, comprising:~~
~~an infeed station;~~
~~a wrap station;~~
~~a conveying system configured to move the packages along a path from the infeed station to the wrap station, at least a portion of the conveying system being selectively adjustable laterally to controllably vary a lateral position of at least certain of the packages traveling along the path;~~

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~~a sensor configured to detect a lateral position of packages; and
a controller configured to receive signals from the sensor and to control the
selective lateral adjustment of the conveying system to position at least certain of the
packages in a desired position when they reach the wrap station.~~

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19. The machine of claim 18 wherein the conveying system comprises at least two conveyors and the desired positioned is established by centering the package on one of the conveyors.

20. ~~The machine of claim 18 wherein the conveying system comprises first and second conveyors that are selectively adjustable with respect to each other.~~

21. The machine of claim 18 wherein the conveying system comprises a conveyor having a first section, a second section pivotally coupled to the first section, and a third section pivotally coupled to the second section.

22. ~~The machine of claim 18 wherein the conveying system comprises a single substantially horizontal conveyor.~~

23. The machine of claim 18 wherein the conveying system comprises an elevator that is laterally adjustable relative to a substantially horizontal conveyor.

24. ~~The machine of claim 18 wherein the conveying system comprises a conveyor roller positioned on a guide rod for lateral movement therealong.~~

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